

MEMORANDUM

DATE: August 14, 1998

TO: Division of Shellfish Sanitation Staff

FROM: R.E. Croonenberghs, Ph.D., Director
Division of Shellfish Sanitation

THROUGH: Eric H. Bartsch, P.E., Director
Office of Water Programs

SUBJECT: Shoreline Survey - Classification Guidelines

Replaces Working Memo #264

PURPOSE: In order to correctly classify shellfish waters as to their suitability for the direct marketing of shellfish, the watershed must be examined for the presence of actual and potential sources of pollution. The following criteria are to be used as a guide for the correct classification and evaluation of significant and deficient properties found during the course of shoreline sanitary surveys. Instructions delineate the required information regarding on-site deficiencies needed by the local health department which is provided through use of the Sanitary Notice and the required information on **all** significant and deficient properties which will be used in the formal survey report. Examples under each classification are not all inclusive. Specialists may encounter situations other than those described.

- I. **SEWAGE POLLUTION SOURCES** - Sewage is defined as "water-carried and nonwater-carried human excrement together with such kitchen, laundry, shower, bath, lavatory, underground, surface, storm and other water and liquid industrial wastes as may be present from residences, buildings, vehicles, industrial establishments or other places."
 - A. **SEWAGE TREATMENT FACILITIES, DIRECT** - These facilities have a permitted designed discharge to tidal waters or free flowing streams.
 1. Subdivision, community or municipal sewage treatment facilities. Collection systems (pump stations) should be included.
 2. **Domestic** sewage from industrial plants, schools, etc. having individual on-site sewage treatment facilities, all with direct discharges to shellfish waters.
 3. Individual dwelling or small on-site sewage treatment facilities which have a system-designed discharge direct to shellfish waters.
 4. A field form is not required for these facilities. They will be inspected by an OWP engineer who will provide a current Preface and inspection form.
 - B. **SEWAGE TREATMENT FACILITIES, INDIRECT** - These facilities do not have a designed discharge. Do not include septic tanks with drainfields.
 1. Package sewage treatment plants with no designed point source discharge (usually a subsurface discharge).
 2. **Domestic** sewage from industrial plants, schools, etc. having individual on-site sewage treatment facilities with no designed discharge.

3. Individual dwelling or small on-site sewage treatment facilities, including land application (spray irrigation, overland flow, etc.).
 4. Septic tank cleaning dumpsites, sewage lagoons, etc.
 5. Experimental systems should be mentioned in Section A general observations.
 6. If the OWP field office does not have information on these facilities, the shellfish field office should try to obtain an inspection report from DEQ.
 7. If no other agency has made an inspection, do so.
 - a. Record all information on field form, including VPDES Permit #.
 - b. Draw a complete diagram on back of field form including buildings, ditches, receiving stream, road(s) with route number, etc. or obtain a schematic from the plant.
- C. ON-SITE SEWAGE DEFICIENCIES, DIRECT - Any property with a direct sewage discharge (gray water included) to tidal waters or free flowing streams will be classified as a direct on-site deficiency under one of the following classifications: CONTRIBUTES POLLUTION, DIRECT; CONTRIBUTES POLLUTION (Kitchen or Laundry Wastes), DIRECT; and NO FACILITIES, DIRECT.
1. CONTRIBUTES POLLUTION, DIRECT
 - a. Direct discharges from outfalls, straight pipes, septic tank systems, privies or cesspools to tidal waters or free flowing streams.
 - b. All malfunctioning or damaged septic systems and/or drainfield systems where there is evidence of seepage presently draining directly and consistently to tidal waters or free flowing streams.
 - c. All sewage disposal systems, except vault privies, located 0' to 5' from tidal waters or free flowing streams at 3' elevation or less with no evidence of seepage or discharge.
 - d. All overflowing privies bordering tidal waters or free flowing streams.
 - e. Surface and bucket privies bordering tidal waters or free flowing streams.
 - f. Pit privies which are full into the riser (above floor level) or contents exposed due to undermining bordering tidal waters or free flowing streams. Pit privies with sewage below the bottom of the riser without evidence of seepage are classified NO POLLUTION.
 - g. Waste **pip**ed from showers or tubs (indoor or outdoor) draining directly to tidal waters or free flowing streams. The waste must drain to an approved holding tank (grease trap, septic tank, dry well) to be classified NO POLLUTION. Enclosed outdoor showers that drain directly onto the ground surface and open rinse-off showers are classified NO POLLUTION, unless they are located 10' or less from tidal waters.
 - h. **Instructions** for completing field form.
 - (1) Record all information on field form.
 - (2) Draw a complete diagram on the back of the field form, show deficiency, buildings, ditches, receiving streams, road with route numbers, etc.

- I. **Issue a Sanitary Notice** with a site diagram on the back of the local health department pink copy (same diagram as field form), with the due date 15 days from the date of the field visit or the next day following a weekend or holiday. Include on the Notice the 911 address if possible and the page and tax map number from the Commissioner of Revenue Office for the Environmental Health Specialist.

2. CONTRIBUTES POLLUTION (Kitchen or Laundry Wastes), DIRECT
 - a. Straight pipes discharging kitchen or laundry wastes directly to tidal waters or free flowing streams, including outside washing machines with drain hose in place.
 - b. Discharges from any kitchen or laundry waste treatment facilities, such as grease traps, directly to tidal waters or free flowing streams.
 - c. All kitchen or laundry waste disposal facilities (grease traps, drainlines, drywells) located 0' to 5' from tidal waters or free flowing streams at 3' or less elevation with no evidence of discharge.
 - d. **DO NOT** include kitchen waste thrown out by pan or bucket.
 - e. **Instructions:** See I C. 1. h. (1) (2)
 - f. **Issue a Sanitary Notice:** See I C. 1. I.

3. NO FACILITIES, DIRECT
 - a. Occupied and vacant property, adjacent to tidal waters or free flowing streams, where there are no facilities available.
 - b. Property, adjacent to tidal waters or free flowing streams, which has facilities that are not usable or are inaccessible.
 - c. Abandoned properties with no facilities are classified NO POLLUTION.

Note: Difference between occupied, vacant and abandoned property:

 - (1) **Occupied** property is a structure which is habitable and has furnishings and furniture and may be occupied occasionally or seasonally. Electric meter is present.
 - (2) **Vacant** property is habitable but does not have furnishings or furniture. Electric meter is present.
 - (3) **Abandoned** property is not habitable without extensive repairs and may or may not have furnishings or furniture. Electric meter is not present.
 - d. Mobile dwelling units (camper trailers, RV's), adjacent to tidal waters or free flowing streams, where no drain pipes are present and the existence of plumbing fixtures cannot be established.
 - e. Campers with holding tanks, adjacent to tidal waters or free flowing streams, parked on-site for frequent use where there are no facilities within 500'.
 - f. Businesses, adjacent to tidal waters or free flowing streams, without facilities on the premises or within 500'. Also included are churches, schools, parks, halls, enclosed crab shedding operations, drawbridge tender stations, etc.

- g. Use of night pails at dwellings adjacent to tidal waters or free flowing streams when you cannot determine where waste is being disposed. Commercial porta-johns at established homes, businesses, marinas, opwbam, etc., adjacent to tidal waters or free flowing streams, where there are no other permanent facilities on-site. If it is necessary to issue a Sanitary Notice to a “Marina or OPWBAM”, attach a copy of the marina inspection form to the Notice. (Commercial porta-johns located on-site at establishments owned by the local, state, or federal government should **not** be given a Notice).
 - i. A property with two residences on-site adjacent to tidal waters or free flowing streams. The first residence has a septic tank with drainfield. The second residence has no facilities, but has been granted permission to use the facilities in the first residence. Issue the second residence a Sanitary Notice, because the first residence septic system was not designed for the extra daily water consumption. (Residences on the same property sharing a pit or vault privy should **not** be given a Notice).
 - j. **Instructions:** See I C. 1. h. (1) (2)
 - k. **Issue a Sanitary Notice:** See I C. 1. l.
- D. ON-SITE SEWAGE DEFICIENCIES, INDIRECT - Any property with a sewage discharge (gray water included) that does not drain directly to tidal waters or free flowing streams will be classified as an indirect on-site deficiency under one of the following classifications: CONTRIBUTES POLLUTION, INDIRECT; CONTRIBUTES POLLUTION (Kitchen or Laundry Wastes), INDIRECT; and NO FACILITIES, INDIRECT.
- 1. CONTRIBUTES POLLUTION, INDIRECT
 - a. Direct discharge of sewage from septic tank systems, privies or cesspools onto the ground surface, but **not** draining directly to tidal waters or free flowing streams.
 - b. All malfunctioning septic tank systems and/or drainfield systems where evidence of seepage has been present or is as evidenced by sewage, algal mat, odor, and/or blackened soil or vegetation. Deep green vegetation **is not** evidence in itself.
 - c. All overflowing privies not bordering tidal waters or free flowing streams. Overflowing privies bordering tidal waters or free flowing streams are classified CP, DIRECT.
 - d. Pit privies which are full into the riser (above floor level) or contents exposed due to undermining.
 - e. Surface or bucket privies.
 - f. Systems with broken covers or tops, makeshift covers, and/or exposed drain tile. (Makeshift covers of steel, fiberglass, or any other durable material that is form fitting and will keep water and rodents out of the tank should **not** be issued a Sanitary Notice. Surveyors should use their professional judgement).

- h. **Instructions:** See I C. 1. h. (1) (2)
 - l. **Issue a Sanitary Notice:** See I C. 1. l.
2. CONTRIBUTES POLLUTION (Kitchen or Laundry Wastes), INDIRECT
- a. Straight pipes discharging kitchen or laundry wastes directly onto the ground surface, including outside washing machines with drain hose in place.
 - b. Discharges from any kitchen or laundry waste treatment facilities, such as grease traps, directly onto the ground surface.
 - c. Damaged systems, broken covers or tops, makeshift covers and exposed drain tile.
 - d. **DO NOT** include kitchen waste thrown out by pan or bucket.
 - e. **Instructions:** See I C. 1. h. (1) (2)
 - f. **Issue a Sanitary Notice:** See I C. 1. l.
3. NO FACILITIES, INDIRECT
- a. Occupied and vacant property, not adjacent to tidal waters or free flowing streams, where there are no facilities available.
 - b. Property which has facilities that are not usable or are inaccessible.
 - c. Abandoned properties with no facilities are classified NO POLLUTION. See I C. 3. c. (1) (2) (3).
 - d. Mobile dwelling units (camper trailers, RV's) where no drain pipes are present and the existence of plumbing fixtures cannot be established.
 - e. Campers with holding tanks parked on-site, not adjacent to tidal waters or free flowing streams, for frequent use where there are no facilities within 500'.
 - f. Businesses without facilities on the premises or within 500'. Also included are churches, schools, parks, halls, enclosed crab shedding operations, bridge tender stations, etc.
 - g. Use of night pails, when you cannot determine where waste is being disposed.
 - h. Commercial porta-johns at established homes, businesses, etc., where there are no other permanent sanitary facilities on-site. (Commercial porta-johns located on-site at establishments owned by the local, state, or federal government should **not** be given a Sanitary Notice).
 - i. A property with two residences on-site. The first residence has a septic tank with drainfield. The second residence has no facilities, but has been granted permission to use the facilities in the first residence. Issue the second residence a Sanitary Notice, because the septic system at the first residence was not designed for the extra daily water consumption. (Residences on the same property sharing a pit or vault privy should **not** be given a Sanitary Notice).
 - j. **Instructions:** See I C. 1. h. (1) (2).
 - k. **Issue a Sanitary Notice:** See I C. 1. l.
- E. POTENTIAL POLLUTION - This category includes those properties on which situations or facilities have been found that do not fall under the guidelines above but have the potential for causing pollution to shellfish waters.

1. Any pipe of unknown origin with **no evidence of discharge** and no one present at time of inspection or owner/occupant does not know what pipe is for.
2. Reportedly failing septic tank with drainfield systems, regardless of distance to the nearest watercourse. This includes systems with no evidence of malfunction or failure at time of inspection, but erupts or fails to drain properly during wet weather or other times of high groundwater conditions. Include only those incidents occurring within the past year.
3. Private residences with large amounts of trash or junk (scrap metal, old tires, engine parts, cars, etc.) around it. Surveyors should use their professional judgement in determining what a "large amount" is. (**Eastern Shore only:** if a situation like this exists, give the name and address of the owner/occupant to the Environmental Health Specialist handling the sanitary deficiencies in that particular growing area so that he or she can get the situation cleared up immediately while the survey is still in progress).
4. Do not classify a property PP based on a statement by anyone other than the occupant or owner. Neighbors' complaints can often be helpful, but do not classify solely on the information they provide.
5. Do not report systems which had repairs within the last year and are now functioning satisfactorily.
6. **Instructions** for completing field form:
 - a. Record all information on field form.
 - b. Draw a complete diagram of property on back of field form including potential pollution, buildings, ditches, receiving streams, road with route numbers, etc.

Note: The following are **NOT PP's**: small single family refuse piles away from tidal waters or free flowing streams, outside "fish sinks" or hand basins and overflow drains from swimming pools, hot tubs or Jacuzzi.

II. NONSEWAGE WASTE SITES - See definition of sewage at I.

- A. INDUSTRIAL WASTES, DIRECT - These sites are required to have a discharge permit to legally discharge to tidal waters or free flowing streams.
 1. All shellfish and crustacea plants, manufacturing/processing plants, government installations with discharge permits or permits under application.
 2. Vegetable and fruit processing plants where processing wastes drain directly to tidal waters or free flowing streams.
 3. Operations where fertilizers, insecticides, pesticides, hazardous or toxic wastes, etc. have a direct impact on shellfish waters (nurseries, chemical companies, Superfund sites); containerized (hazardous or toxic) waste stored unprotected from the elements and adjacent to tidal waters or free flowing streams.
 4. All shellfish and crustacea plants with underground injection control (UIC) plans allowed by EPA that are **malfunctioning** and draining directly to tidal waters or free flowing streams. At facilities that are **not** malfunctioning, note on daily log that plant is still in operation and mention in Section A general observations.

5. **Instructions:** See I A. 4. a. b. c.

B. INDUSTRIAL WASTES, INDIRECT

1. Vegetable and fruit processing plants where processing wastes indirectly drain to tidal waters or free flowing streams. Get VPDES Permit # whenever possible.
2. **Above** ground storage tanks. Do **not** include oil or gas tanks for private residences or tanks **under** 500 gallons at businesses.
3. Operations where fertilizers, insecticides, pesticides, hazardous or toxic wastes, etc. have an indirect impact on shellfish waters or indirectly drain to tidal waters (nurseries, chemical companies, Superfund sites); containerized (hazardous or toxic) waste stored unprotected from the elements.
4. All shellfish and crustacea plants with underground injection control (UIC) plans allowed by EPA that are **malfunctioning** and indirectly drain to tidal waters or free flowing streams. At facilities that are **not** malfunctioning, note on daily log that plant is still in operation and mention in Section A general observations.
5. **Instructions:** See I A. 4. a. b. c.

C. SOLID WASTE SITES, DIRECT

1. Municipal and private landfills where runoff would drain directly to tidal waters or free flowing streams.
2. Satellite dumpster locations where run-off would drain directly to tidal waters or free flowing streams.
3. **Instructions:** See I A. 4. a. b. c.

D. SOLID WASTE SITES, INDIRECT

1. Municipal and private landfills where runoff would indirectly drain to tidal waters or free flowing streams.
2. Satellite dumpster locations where runoff would indirectly drain to tidal waters or free flowing streams.
3. Businesses where large amounts of trash, junked cars, auto parts (tires, batteries, 55 gallon drums with used oil, antifreeze, brake fluid, etc.) are stored unprotected from the elements. Try to estimate area covered. (1 acre = 4840 square yards = almost 1 football field = 5000 square yards). Specialists should use their professional judgement when determining what a "large amount" is.
4. **Instructions:** See I A. 4. a. b. c.

III. BOATING ACTIVITY - This category includes:

- all commercial and private marinas
- all boat yards, repair and dry storage facilities adjacent to tidal waters (do not include inland or nontidal operations)
- all commercial or government-owned public boat ramps, piers or landings
- all facilities or locations where 3 or more boats **with marine toilets** can be stored, docked

or moored in tidal waters

- all facilities or locations where 4 or more boats are stored, docked or moored in tidal waters

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- **Do not** include piers at private dwellings where boats are stored, docked, or moored **unless they fall under one of the above criteria**

- **Do not** include parking or sales lots where trailered boats are stored if they are not part of a specific marina or dry storage facility

The previous year's marina inspection form, provided by the Division of Wastewater Engineering Marina Chief (DWEMC), will show whether a facility is a Marina, Other Place Where Boats Are Moored (OPWBAM), or an establishment that is Under Surveillance. A copy of the marina form is to be submitted to the marina chief upon completion of the inspection, along with a photocopy of the diagram of the facility on the back of the field sheet and a photocopy of the field map with the location of the establishment circled and numbered. The **original** marina form should be kept with your other survey field forms.

A. MARINAS

1. Definition:

- a. Any installation operating, under public or private ownership, which provides dockage or moorage for boats (exclusive of paddle or rowboats) **and**;
- b. Provides, through sale, rental or fee basis, any equipment, supply or service (water, electricity or fuel) for the convenience of the public or its lessee, renters or users of its facilities.

2. Public or private marinas that meet the conditions in III A. 1. a. b.

3. All boat yards and repair facilities adjacent to navigable waters that meet the conditions in III A. 1. a. b.

4. All commercial "dry storage" facilities located adjacent to navigable waters that meet the conditions in III A. 1. a. b.

5. All boat facilities where 3 or more boats with marine toilets are docked or moored that meet the conditions in III A. 1. a. b.

6. All boat facilities or locations where 4 or more boats of any type are stored, docked, or moored in tidal waters that meet the conditions in III A. 1. a. b.

7. **Instructions** for completing field and marina inspection forms:

- a. Record all information on field form.
- b. Draw a complete diagram on the back of the field form of the marine facility with access road and route numbers.
- c. Refer to DWEMC instructions. Verify all information on marina inspection form. Update inaccurate information.
- d. Copies of any variances issued to marina facilities will be attached to the previous year's form when applicable. The specialist should determine if conditions of the variance are being met. Violations should be noted in the "Comment" section on the marina form.
- e. If a "Marina or OPWBAM" has a pump-out unit, ask the owner/dockmaster to exercise the pump to make sure that it works. Also inspect the hose for cracks and holes and report those infractions in the comment section on the inspection form.
- f. If a new establishment is found, fill out a blank marina inspection form with as much information as you can obtain. Make sure you use the current updated marina form. Information needed:

- (1) facility and owner's name and address.
- (2) date inspected and county.
- (3) body of water, drainage basin, shellfish growing area.

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- (4) type of establishment (Marina or OPWBAM)
- (5) whether or not the facility is in operation.
- (6) # of wet slips/moorings and dry storage spaces available.
- (7) # of boats present in wet slips and dry storage spaces.
- (8) availability of boating services, type and description of sanitary facilities, boat holding tank pump-out facilities and dump station facilities.

B. OPWBAM - OTHER PLACES WHERE BOATS ARE MOORED

1. Definition: Any installation operating under public or private ownership, which provides dockage, moorage or mooring for boats (exclusive of paddle or row boats) either on a free, rental, or fee basis for the convenience of the public.
2. All commercial or government owned public boat ramps, piers, or "landings" that meet the conditions in III B. 1.
3. All boat yards and repair facilities adjacent to navigable waters meeting conditions in III B. 1.
4. All commercial "dry storage" facilities located adjacent to navigable waters that meet the conditions in III B. 1.
5. All boat facilities where 3 or more boats with marine toilets are docked or moored that meet the conditions in III B. 1.
6. All boat facilities or locations where 4 or more boats of any type are stored, docked, or moored in tidal waters that meet the conditions in III B. 1.
7. Community boat ramps that meet the conditions in III B. 1. If there is a marina form to fill out at a private community boat ramp that does not fall under the above criteria (ramp for residents only, not general public), complete form for DWEMC and request in the "Comment" section on the marina form that the facility be removed from the marina list. Property will then **not** be included in survey report.
8. Piers at private dwellings are not classified OPWBAM unless they can accommodate 4 or more boats and the pier is being used by more than one residence.
9. **Instructions:** See III A. 7. a. b. c. d. e. (1) (2) (3) (4) (5) (6) (7) (8)

C. UNDER SURVEILLANCE

1. This classification will be established by the DWEMC. Do not classify new marine facilities as Under Surveillance.
2. If there is a marina form to fill out at a private community boat ramp, where ramp is for residents only, not the general public, complete form for DWEMC and request in the AComment@ section on the marina form that facility be removed from the marina list. Property will then not be included in survey report.
3. **Instructions:** See III A. 7. a. b. c. d. e. (1) (2) (3) (4) (5) (6) (7) (8)

IV. SECTION E: CONTRIBUTES ANIMAL POLLUTION - Any property where animals are present and/or the resulting wastes are stored. The presence of animals or animal wastes

will be classified according to the following guidelines:

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A. CAP - DIRECT

1. Any property where any livestock and/or 5 or more **confined** (pen encompasses part of stream, pond, etc.) domestic fowl have direct access to tidal waters or free flowing stream.
2. Any property where 25 or more kenneled animals are located and waste is concentrated and drains directly to tidal waters or free flowing stream.
3. All brooder houses where waste is concentrated and drains directly to tidal waters or free flowing stream.
4. Any property where concentrated animal wastes are stored and runoff drains directly to tidal waters or free flowing stream.
5. Do not include wild animals or fowl as CAP. Any significant numbers of wild animals and/or fowl should be mentioned in the Section A narrative (specialist's discretion) .
6. **Instructions** for completing field form:
 - a. Record all information on field form.
 - b. Draw a complete diagram on the back of the field form including buildings, ditches, receiving streams, road with route numbers, etc.
 - c. Obtain the VPDES Permit # or the nutrient management plan specifications from the owner, DEQ or the Division of Soil and Water Conservation whenever possible.

B. CAP - INDIRECT

1. Any property where 5 or more livestock and/or 25 or more domestic fowl are observed on property and wastes indirectly drains to tidal waters or free flowing stream.
2. Any property where 25 or more kenneled animals are located and waste is concentrated and indirectly drains to tidal waters or free flowing stream.
3. All brooder houses where waste is concentrated and indirectly drains to tidal waters or free flowing stream.
4. Any property where concentrated animal wastes are stored and runoff indirectly drains to tidal waters or free flowing stream.
5. **Any** property with concentrated animal waste management facilities (farrowing/finishing house lagoons, cattle pens, brooder houses) indirectly draining to tidal waters or free flowing stream.
6. **Instructions:** See IV C. 3. a. b. c.
7. Do not include wild animals or fowl as CAP. Any significant numbers of wild animals and/or fowl should be mentioned in the Section A narrative (specialist's discretion).
8. **Instructions:** See IV A. 7. a. b. c.